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ABSTRACT

A review of current educational literature identifies three different approaches to defining, describing, and applying the term "teacher development." One application of the term deals with the commonly experienced changes most teachers undergo. Teachers develop through the stages of survival, consolidation, renewal, and maturity. The second application of teacher development concerns the personal and adult development of teachers. Professional development is viewed as an aspect of ego, moral, and cognitive development. The third application involves the promotion and support of teacher development through inservice and professional programs. Levels and stages of each concept of development are discussed. (CJ)

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Research Series No. 70

WHAT'S ALL THIS TALK ABOUT TEACHER DEVELOPMENT?

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Abstract

The term "development" has recently entered the teacher education lexicon, joining the more familiar terms of "education" and "training." In a survey of the literature on teacher development, the authors identified three approaches to it. The first approach includes attempts to *construct* a developmental theory. The second approach, which involves efforts to *apply* existing developmental theories, takes two forms: (1) research using structural-cognitive theories as an interpretive framework and (2) efforts to translate developmental constructs into teacher education curricula. The third approach includes descriptions of practice and efforts to *justify* them in developmental terms. Descriptions of the concept of development within each of these approaches are presented and compared.

What's All This Talk About Teacher Development?[1]

Sharon Feiman and Robert E. Floden[2]

The term "development" has recently entered the teacher education lexicon, joining the more familiar terms of "education" and "training." Perhaps the popularity of developmental theories has encouraged teacher educators to seek applications in their own work. Certainly a stable teaching population makes staff development a high priority. Much of the inservice literature speaks of nurturing professional growth and development, a striking contrast to the previously prevailing rhetoric of competency-based training. The National Institute of Education is planning a multi-year research program on staff development, including an initial effort to clarify the meaning of "development."

For some, at least, the shift to development is a deliberate attempt to signal a change in thinking about professional learning and improvement. Developmentalists Irving Sigel (1978), Norman Sprinthall (Note 1), and Douglas Heath (Note 2) have recommended that teacher educators adopt a new paradigm--developmental--and discard the limitations of a behavioral conception. Teachers' centers are associated with a "developmental" rather than a "delivery" style of inservice, and Kathleen Devaney

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[1]This is a revised version of a paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1979.

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(1978), director of the Teachers' Centers Exchange, notes that "the delivery analogy is specifically rejected by educators who hold a view of children and adult learning as mental growth spurred from within." In the introduction to a recent book on staff development, editors Ann Lieberman and Lynn Miller (1979) explain why they chose the title "staff development" rather than inservice or teacher education/training. "By development, we mean a rejection of notions of training and an acceptance of notions of growth--often in a nonlinear and nonrational way" (p. ix).

Despite considerable talk about teacher development, no unified perspective guides research and practice. Teacher educators use the term to mean different things; researchers look at teacher development in various ways. While people are recommending that programs meet the developmental needs of teachers and be evaluated in terms of their contribution to teacher development, they each have different things in mind. Moreover, they often seem unaware of alternative views.

The need for clarification is important because the shift to development may be as much a reaction to previous extremes as it is a move toward a more comprehensive view of teacher learning. Just as the child-centered movement was partly a response to previous authoritarian patterns of education in classrooms, the change to a developmental perspective may be partly a response to the restriction of teacher education to formal professional preparation and the further narrowing of it to explicitly defined skills and competencies.

Yet, as researchers and practitioners attempt to apply aspects of developmental theory to research and practice in teacher education, these same theories are undergoing critical scrutiny. John Flavel, a developmental

psychologist, anticipates that "the concept of stage will not figure importantly in future scientific work on cognitive growth" (Flavel, 1977, p. 249). At the same time, efforts to formulate stages in teacher development are increasing.

This paper grew out of our search of the developmental literature in teacher education. We wanted to find out how the term was being used--a first step toward assessing the strengths and weaknesses of a developmental approach. Although a large body of educational literature is concerned in some way with changes in teachers over time, we restricted our attention to literature that explicitly introduces developmental considerations. The material is relatively recent and not extensive. It includes descriptions of practice, reports of research, and position papers from funding agencies.

From our review of the literature,we have identified three approaches to, or conceptions of, teacher development. The first involves attempts to construct a developmental theory of teachers. The basic question is: How do teachers develop or change over time? The work of Frances Fuller and her colleagues on teacher concerns provides the best example (Fuller, 1969; Fuller & Bown, 1975; Fuller, Note 4; Fuller, Peck, Bown, White, & Garrard, Note 6). The second category involves efforts to apply existing developmental theories to practice. This takes two forms: (1) research using structural-developmental theories as an interpretive framework, and (2) efforts to translate developmental constructs into teacher education curricula. The underlying question is: Can developmental constructs explain individual differences among teachers and offer guidance in designing interventions? The case studies of Carol Witherell (1978) and the development work of Sally Glassberg (Note 5) are illustrations of this. The third category contains

descriptions of practice and efforts to justify them in developmental terms. The underlying question is: How can teacher development be supported and fostered? The example of a teacher education experiment in the forties, the Bank Street Workshop, underscores the relation between developmental and progressive educational ideas and practices (Mitchell, 1950). The workshop has clear parallels in the activities and philosophy of teachers' centers and advisory programs.

In the remainder of this paper, we consider the way in which teacher development is conceived in each approach, chiefly through descriptions of representative pieces of work. It will be apparent that, though similarities across approaches exist, the approaches differ on a variety of points. When someone says they take a developmental approach to teacher education, the implications of that statement vary according to the approach ascribed to. People apparently in agreement on the desirability of a developmental approach, may find considerable disagreement as their discussion becomes more concrete. We hope that our review of these three approaches will clarify at least some of the possible interpretations of the new emphasis on teacher development.

Constructed Theories of Teacher Development

Developmental Concerns of Teachers: Frances Fuller

The best known example of an empirically constructed theory of teacher development is the work of the late Frances Fuller and her colleagues at the University of Texas in Austin. Fuller observed the mismatch between what preservice students get in their education courses and what they say they need. She set out to discover "what [student] teachers are concerned about and whether their concerns can be conceptualized in some useful way" (Fuller, 1969, p. 208). She hoped to find regu-

larities in teachers' concerns over time which could help teacher educators choose more appropriate course content and experiences.

In her first "developmental conceptualization," Fuller (1969) characterized teacher concerns in terms of a self-other dichotomy. Over a 10-year period, this conceptualization was refined and modified several times. The most recent formulation posits three stages of concern: self-as-teacher concerns, teaching situation concerns, and pupil concerns (Fuller & Bown, 1975). A closer look at the early and later conceptualization and the research which produced them will clarify the notion of teacher development that undergirds this work.

As early as 1963, Fuller helped organize counseling seminars for student teachers. The purpose of the seminars was to help counselors better understand teachers. Eventually, these seminars provided the data for her first study of teacher concerns. In that study (Fuller, 1969), small groups of student teachers were encouraged to talk about anything they wanted in a two-hour weekly seminar. The sessions were taped and each statement classified according to its main topic. The frequencies of topics discussed and the clinical impression gained from listening to the tapes suggested a dichotomy between concerns with self and concerns with pupils. The former were prevalent in the first three weeks of the student teaching semester; the latter appeared toward the end of the term.

In a second study, student teachers were asked every two weeks during the semester to write about what concerned them most. This time statements were classified according to three topics: concern with self-adequacy, concern with misbehavior and class control, and concern with pupil learning. Of the 29 student teachers, 22 expressed concerns about self-adequacy; none expressed concerns about pupil learning.

Fuller integrated these findings with existing research on "perceived problems of student teachers or beginning inservice teachers." The research studies included six surveys published between 1936 and 1965 and two unpublished surveys of beginning inservice teachers. Despite the diversity of populations, the findings consistently pointed to a preoccupation on the part of student teachers and beginning teachers with self-oriented concerns.

Covertly, student teachers and beginning teachers are trying to discover the parameters of the school situation and figure out where they stand. Thus student teachers ask themselves: "Is this my class or the teacher's? Can I try out my own ideas here or will someone else tell me what to do?" Overtly, they are concerned about discipline and control, and more generally with self-adequacy. The student teachers worry about their "abilities to understand subject-matter, to know the answers, to say 'I don't know' on occasion, to have the freedom to fail, to anticipate problems, to mobilize resources and to make changes when failures reoccur" (Fuller, 1969, p. 220). The broad overt concern also involves "the willingness to listen for evaluation and to separate out the biases of evaluators" (Fuller, 1969, p. 221).

Do experienced teachers have similar concerns? Fuller offered a tentative answer based on concerns reported by others. Gabriel (1957) had surveyed the problems and satisfactions of teachers. Fuller regrouped his data to show that experienced teachers are less often concerned with maintaining discipline or worried about criticisms of inspectors than inexperienced teachers are. Their satisfactions come from success with pupils and they are most often concerned about slow progress of students. Outstanding teachers interviewed by Jackson (1968) expressed concerns about pupils' progress. Several spontaneously recalled

their decreasing preoccupation with discipline and self-adequacy. Fuller tentatively characterized the "late teaching phase" as a time when teacher concerns focus on pupil gain and self evaluation as opposed to personal gain and evaluation by others. "Mature" teacher concerns include the ability to understand pupils' capacities, to specify objectives for them, to assess their gain, to recognize one's own contribution to pupils' difficulties and gains, and to evaluate oneself in terms of pupil learning (Fuller, 1969, p. 221).

Both the early and the later concerns were expanded and refined in subsequent work. Along the way, new instruments for measuring stages of concern were also developed (e.g.,Teacher Concerns Statement, Teacher Concerns Checklist, Teacher Concerns Questionnaire). Use of the most recent formulation (Figure 1), based on a factor analysis of the Teacher Concerns Checklist, resulted in the identification of three phases of teaching concerns. The pre-teaching phase of non-teaching concerns becomes a stage of self-oriented concerns.

I.	Early phase	0 Concerns about self (non-teaching concerns)
II.	Middle phase	1 Concerns about professional expectations and acceptance
		2 Concerns about one's own adequacy: subject matter and class control
		3 Concerns about relationships with pupils
III.	Late phase	4 Concerns about pupils' learning what is taught
		5 Concerns about pupils' learning what they need
		6 Concerns about one's own (teacher's) contributions to pupil change.

Figure 1. Model of Teacher Development (Adapted from Fuller, Note 4).

In the pre-teaching phase, education students tend to identify with pupils and are sometimes quite critical of classroom teachers. As soon as they have actual teaching experience, their idealized concerns for pupils are replaced by an intense concern with their own survival as a teacher. Fuller hypothesizes that these feelings are evoked or exacerbated by the student teacher's status.

Concerns about limitations and frustration of the desire to teach (not just survive), ensue. These feelings seem to be evoked by features of the work setting; inservice teachers have more concerns of this type than do preservice students. They are self-oriented to the extent that they focus on teaching performance, not pupil learning.

Pupil concerns are expressed by both preservice and inservice teachers, but preservice teachers cannot always act on these concerns. "Flooded by feelings of inadequacy, by situational demands and conflicts, they may have to lay aside these concerns until they have learned to cope with more urgent tasks" (Fuller & Bown, 1975, p. 39).

Nature of the Stages and the Progression

When Fuller et al. (Note 6) use the term "stage," they have in mind a cluster of concerns, a set of preoccupations which seems to unfold in a particular sequence over the course of the preservice experience. In this passage, Fuller and Bown (1975, p. 37) say what the "stages" are not:

> Whether these really are "stages" or only clusters, whether they are distinct or overlapping, and whether teachers teach differently or are differentially effective in different stages, has not been established. These stages, if such they are, have been described mainly in terms of *what the teacher is concerned* about rather than what he is actually accomplishing. However, there seems to be little doubt that the labels describe clusters of concerns and consequently provide a useful means of describing the experience of learning to teach. (Italics mine.)

What accounts for the shift or progression? How does the transition take place? There is no empirical work on this question and only some very general suggestions. In an early reference, Fuller and her colleagues (Note 6) connect the empirically derived stages of concern with Maslow's hierarchy of needs: "Early concerns can be thought of as more potent security needs and later concerns as task-related and self-actualizing needs which only appear after the prepotent security needs have been satisfied" (Fuller et al., Note 6).

There is the clear indication that pupil concerns are more desirable than self-oriented concerns and the speculation that later concerns cannot emerge until earlier concerns are resolved. Somehow teachers get to the third stage with time, experience, and a little help from teacher educators. Teacher educators should be providing materials, information, and experiences consonant with developing teachers' felt concerns as they occur rather than "teaching against the tide."

Extensions of Fuller's Work

Katz (1972) extends Fuller's conceptualizations, drawing on her own experiences with preschool teachers. "It is useful," she writes, "to think of the growth of preschool teachers (and perhaps other teachers, also) as occurring in stages linked generally to experience gained over time" (p. 53). Concerned with the location, timing, and content of teacher education, Katz identifies four developmental stages with their associated training needs. While individual teachers may vary in the amount of time they spend in each stage, the general conceptualization covers the first five years of teaching.

Stage 1: Survival. Being responsible for a group of young children for the first time and having to encounter their parents naturally evokes teachers' anxieties. The discrepancy between ideals and classroom realities intensifies feelings of inadequacy. During this state, Katz recommends on-site support and technical assistance from persons who know the beginner and the teaching situation. Such training must be readily and constantly available. The model of the British headmaster or advisor who works closely with teachers in classrooms in a nonevaluative manner is an example of this.

Stage 2: Consolidation. During the second stage, which usually occurs toward the end of the first year, the teacher begins to consolidate what s/he has learned and to differentiate tasks and skills to be mastered. Having acquired a baseline of information about what young children are like, the teacher now begins to focus on problem children and problem situations. Again, on-site assistance is needed. Teachers at this stage need opportunities to talk with specialists, exchange ideas with more experienced teachers, and share feelings with other beginners.

Stage 3: Renewal. During the third or fourth year, the teacher gets tired of doing the same old things (Valentine cards, Easter bunnies, pumpkin cutouts) and becomes interested in new teaching materials and methods. Exposure to new ideas through participation in teachers' centers, attendance at regional workshops and conferences, membership in professional associations, professional reading, and classroom visitation are recommended. Renewal is still conceived of in technical terms--adding new ideas, techniques, and materials to one's repertoire.

Stage 4: Maturity. While some teachers may reach maturity in three years, others need five or more. Mature teachers have come to terms with themselves as professionals and have the perspective to reflect on more fundamental educational questions. Katz sees this as the time for teachers to work toward an advanced degree, to participate in conferences and seminars, to read widely, and to interact with educators working on varied problems.

Discussion

It is clear that Fuller's early work has had a strong influence on a number of subsequent studies. Perhaps because the stages of development arose out of studies particularly focusing on teachers, they seem to give intuitively reasonable descriptions of commonly experienced changes that most teachers undergo in the early years of their careers.

Researchers have yet to raise questions about the degree to which similar stages would be found in the development of concerns of beginning professionals in other fields. Perhaps the general pattern of stages is common to a number of beginning experiences in a variety of aspects of life, in a way returning to Maslow's (1954) hierarchy of needs

How does this approach to teacher development help us to understand the mechanisms by which teachers move from one stage to another? Fuller's work has served as the basis for a teacher education program aimed at the concerns teachers are experiencing at a given point in time. The idea seems to be that the teacher education program should be matched to the dominant concerns. However, this does not answer questions about the role of teacher education as a means for enhancing the developmental process. Addressing current concerns will probably make teachers feel more comfortable, and make them feel that their education

is highly relevant. But feelings of comfort and relevance need not be linked to attainment of the most desirable educational outcomes.

The question of desirability has yet to be seriously considered in this research tradition. Fuller's writing suggests that later developmental stages are preferable, and that a goal of teacher education should be to move teachers to these stages as quickly as possible. But what justification would be given for the superiority of these later stages? To assert that later means better is to commit the naturalistic fallacy. Certainly in Katz' (1972) work it is unclear that the third stage is better than the second. As with any theory that develops out of an attempt to describe what is, there is always a great danger of overinterpreting the resulting description. A description, even an extremely good description, may not have an accurate notion of how things might be changed, and certainly is insufficient for drawing conclusions about what should be.

Applications of Cognitive Developmental Theories

A second approach to the study of teacher development draws theories and ideas from developmental psychology. Teacher development is viewed as a form of adult development. Characteristics describing effective adult functioning are assumed to be applicable to effective teachers and teaching. Research has examined some relationships between developmental predictors and teacher beliefs and actions.

The view of learning associated with developmental theories is said to have important implications for an understanding of how teachers learn and the conditions that support professional growth. Thus developmental theories would provide both ends and means for teacher educators. Evaluations of the effects of developmentally oriented programs in moving teachers to higher stages or levels have been conducted.

We can illustrate both research aspects of this second approach to the study of teacher development from recent work at the Department of Psychoeducational Studies of the University of Minnesota. Sprinthall (Note 1) has outlined a developmental perspective on teachers as adult learners. Witherell and Erickson (1978) have conducted a structural-developmental analysis of teachers' views of teaching and human behavior in relation to their teaching behavior. Glassberg (Note 5) has evaluated a curriculum designed to promote the ego, moral, and conceptual development of student teachers.

Teachers as Adult Learners

At a recent invitational conference exploring research issues on teacher education, Sprinthall (Note 1) suggested that "developmental theory presents an interesting and sufficiently complex new paradigm for teacher education." He reviewed a set of studies connecting developmental stages with effective performance of adults in general and of adults in teaching. Since developmental stages or levels offer promise as predictors, developmental growth ought to be a basic aim of teacher education.

Applications of Cognitive-Developmental Theories to the Study of Teacher Development

Witherell and Erickson (1978) use Loevinger's theory of ego development and Kohlberg's theory of moral development as a framework for studying the relationship between teachers' conceptions of teaching and human development, and their patterns of teaching behavior.

Loevinger (1976) views the ego as the master trait subsuming four domains: (1) impulse control or character development, (2) interpersonal style, (3) conscious preoccupations, and (4) cognitive style. Ego development involves

an increase in complexity and differentiation in the conception of self in a social context. Autonomy and consciousness are the hallmarks of mature ego development.

Loevinger's theory shares the Piagetian notion of stage; ego stages are conceptualized as equilibrated structures, related to each other in an invariant hierarchical sequence. Ten stages and transition levels have been identified, with the normal range of adult ego development covering the Conformist through the Autonomous Stages (See Figure 2).

From Loevinger's theory, Witherell and Erickson draw implications for a definition of teacher effectiveness and for educational goals.

> Increased complexity in one's understanding of self and the capacity to imagine multiple alternatives, typical of the higher stages of ego development, probably increase one's behavioral options and coping strategies. In addition, because the more advanced stages of ego development are characterized by increased flexibility, differentiation of feelings, respect for individuality, tolerance for conflict and ambiguity, the cherishing of interpersonal ties, and a broader social perspective, advancement in ego development would appear to stand on its own as educationally desirable for both teachers and students. (Witherell & Erickson, 1978, p. 232)

They draw similar implications from Kohlberg's theory of moral development. In Kohlberg's view, the essential ingredient of moral development is a certain mode of reasoning or judgment which is the product of a particular cognitive structure. In his studies of children and adults, Kohlberg distinguishes six stages of moral reasoning, which can be grouped into three levels: Level I --Premoral, Level 2--Conventional Rule, Level 3--Autonomous Principled Morality. The researchers claim that a teacher's contribution to the moral development of students is in part determined by the teacher's own level of moral development.

Conformist Stage (I-3)

Persons at this stage view themselves and others as conforming to socially approved codes and norms. Explanations of behavior and situations are conceptually simple. There is little awareness of inner life or depth of feeling.

Conscientious-Conformist Stage (I-3/4)

Persons at this stage begin to allow for exceptions and contingencies in their generalizations. There is an increase in self-awareness and the capacity to imagine multiple possibilities in the situation.

Conscientious Stage (I-4)

At this stage, persons display and perceive complex thinking. Behavior is viewed in terms of patterns of traits and motives. The capacity to take the role of others,cognitively and emotionally,deepens. Self-evaluated goals and rules, differentiated feeling, and high achievement characterize this stage.

Individualistic (I-4/5)

Paradoxes and inner conflicts are beginning to be tolerated. Persons at this stage demonstrate a respect for individuality and an emerging cherishing of interpersonal ties.

Autonomous (I-5)

Autonomous persons can integrate unrelated ideas. They have a heightened respect for autonomy and emotional interdependence. Interest in development, role conceptions, and a richly differentiated inner life characterize this stage.

Integrated Stage (I-6)

A rare attainment, this stage adds the integration of a sense of identity and self-actualization to the characteristics of the autonomous stage. Characteristics include increased objectivity, transcendence of self, openness to development,and a democratic character structure.

Figure 2. Loevinger's characteristics of stages which constitute normal adult range (Adapted from Witherell & Erickson, 1978).

> Teachers who are autonomously committed to the ethical development of their students and to principles of the social contract...are more likely to...encourage student participation and leadership than are teachers who base their commitments on socially acceptable cliches or on the present bureacratic realities and authority structures in schools. (Witherell & Erickson, 1978, p. 231)

Through five case studies, the relationships between differences in ego development and teachers' beliefs and classroom behavior are investigated. Three major hypotheses emerge from the data analysis:

1. Teachers' actions are linked to (and linked by) the theories and values teachers hold.

2. Patterns of teaching behavior and educational beliefs are associated with differences in developmental stage.

3. Teachers who have reached a higher developmental stage demonstrate both greater complexity and commitment to individuals in such areas as

    a. analytic self reflection,

    b. philosophy of education.

    c. constructs relating to children's perspective,

    d. generation and use of varieties of data in teaching, and

    e. understandings and practices relating to rules, authority and moral development in the classroom.

Case study research is difficult to summarize. One needs to dwell on the data and construct a picture of an individual to evaluate the validity of the researcher's interpretations. Some idea of how developmental theories are used can be conveyed by comparing the responses

of two teachers in the study to the problem of stealing in the classroom. These passages, which include teachers' responses and researcher's interpretations, represent only the tiniest fraction of the data.

Teacher 1 (Ego-development ratings: Individualistic and Autonomous)

Response to stealing in the classroom	She (Karen) related one situation where the class's lunch money had been stolen from her desk. Karen announced to her students that the money had been stolen and that since no one had come in or left the room during the moring, it had to have been by someone in the room. She also pointed out that without getting the money back, they couldn't buy their lunches. She then said to her students: I'm going to go into the hall and anybody that knows anything at all about what might have happened, come out one at a time and talk with me. ...After serveral kids came out, here comes the kid that took it. She said, 'I took the money,' and she cried. I just hugged her and thanked her for steppin' up and saying so. She went back in and some other kids came out. I went back to the room and said, 'I just want you to know that we had some really honest people in this room. And one person did a really hard thing, because they did take our money and they had to say so and give it back. I'm really proud of you for doing that.'
Developmental Interpretation	Through her handling of the problem, Karen demonstrated that her primary concern was with the protection of individual privacy and the spirit of social cooperation within her class. She wasn't shocked or angered by the incident, but rather treated it as a community problem that could be solved constructively. A concern for her students' inner lives, the capacity to deal with conflict, a freeing from the 'oppressive demands of conscience,' and a cherishing of personal ties are all characteristics of the Autonomous Stage (emphasis added).

Teacher 2 (Ego-development ratings: Conscientious-Conformist)

Response to stealing in the classroom

When asked what she does about stealing incidents in her classroom, Joyce explained that she usually tells the class that 'if they would return whatever's missing to my desk before lunch, I'll be happy.' She spoke at length about one girl, however, who stole from other students, and, according to Joyce, from her parents as well.

> She's very bright, but lazy and sneaky. I told her parents that. I told her what happens to people who steal when they get older. Stealing runs in that family.

Joyce explained that she'd tried everything with this student. She spoke in detail of her exasperation on one occasion:

> I told two kids they could take anything they wanted from her desk--and she cried. She was upset. I was never so happy in my life to see someone cry.. The only way I can touch her is when she cries.

Developmental Interpretation

Joyce's apparent insensitivity to the underlying meanings of messages in this student's behavior was probably not due to malice on her part, but rather to an incapacity to get past her own exasperation and repugnance for the repeated acts of stealing, to where she could enter the perspective of a troubled child.

From the analysis just presented, it is apparent that Joyce demonstrates the stereotypic, social approval orientation of the Conformist Stage. For the most part, she seemed unaware of the contingencies of either her own behavior or that of others and has not appeared to establish self-evaluated standards or principles for guiding her actions and judgements. (Witherell & Erickson, 1978, p. 235-236)

The research appears to confirm the underlying assumption that teachers at higher stages of development are more effective than their colleagues at lower stages. But, of course, this is the very assumption on which the research rests. Effectiveness is defined in terms of a more complex and differentiated framework for understanding and coping

with classroom realities. Professional development is taken as synonomous with or at least parallel to personal development. (In the third section of this paper, we refer to coding schemes for analyzing teachers' beliefs which are suggestive pedagogical formulations of developmental constructs.)

Practical Applications of Cognitive-Developmental Theories

Practical applications of cognitive developmental theories take one of two forms: specification of development as either the end of translation of developmental constructs into means. Sprinthall (Note 1) lays out the deceptively simple logic involved in moving from a conception of how teachers develop to a belief about how they ought to develop. "If we have good reason to believe that more mature and higher stage adults can function more complexly, then let's induce, stimulate, exhort, cajole, nurture and promote growth."

While researchers who study teacher development within a cognitive or structural developmental framework seem confident that the goal is clear, they are less certain about the means. Still they look to developmental constructs for guidance in designing educational experiences.

In this, they follow the example of some cognitive theorists who not only refine and validate their theory through continued research, but also contribute to the promotion of practical applications. For example, Kohlberg (1969), has claimed that moral development can be facilitated by providing persons with experiences of conflict or disequilibrium and then exposing them to the type of reasoning common to the next higher stage of development.

A Developmental Curriculum for Student Teachers

Glassberg (Note 5) builds on Kohlberg's "practical" suggestion in designing a student teaching curriculum. She claims that the curriculum evolved through

the translation of cognitive-developmental constructs into educational practices. The central elements of the curriculum include role-taking, reflection, and support, all of which are justified from a developmental perspective.

The student teacher role can create disequilibrium by confronting student teachers with problems that challenge their ways of thinking. (A parallel explanation may be appropriate for experienced teachers undertaking a major change in their teaching.) Student teaching certainly entails a major role-shift from that of college student and carries increased responsibility. In addition to the inevitable disequilibrium and role-taking built into student teaching, Glassberg added a second role, peer supervisor, which requires student teachers to help analyze the teaching experience of their peers as well as themselves.

Through a structured curriculum in peer supervision, student teachers learn skills to carry out this new role. The same skills (role-taking, empathic responding, interaction analysis, personal reflection and so on), when practiced in their classrooms, were considered useful tools for "facilitative" teaching and a means of promoting the student teachers' psychological development.

That development is defined in terms of those domains for which cognitive-developmental theories exist. Professional development is viewed as an aspect of ego, moral, and cognitive development. This is reflected in the stated objectives of Glassberg's curriculum: (1) development of a more complex, differentiated, and integrated understanding of self and others; (2) growth toward principled autonomy; and (3) development of more complex ethical reasoning.

Assessment of Developmental Growth of Student Teachers

Glassberg used three formal pre/post measures to assess developmental change in her students. Rest's Defining Issues Test gave an estimate of ethical development. Loevinger's Sentence Completion Test gave an estimate of personal development. Rotter's Internal-External Locus of Control Scale gave an estimate of the individual's perception of the relationship between behavior and the events which follow.

Seventeen of the 23 student teachers in her experimental group (peer supervision seminar) showed a positive stage change and 94% of the upward movement was one stage higher. Experimental subjects also increased in their use of principled moral reasoning and shifted from an external to a more internal locus of control. From these results Glassberg concludes: "It appeared that the role-taking opportunities students experienced as they assumed the role of 'teacher' and 'peer supervisor' in a supportive environment which encouraged reflection and integration of experiences promoted higher levels of ego development" (Glassberg, Note 5, p. 15).

Glassberg does offer a final caveat which indicates her awareness of the limitations of cognitive developmental theories in helping educators devise specific instructional strategies. In the final analysis, she credits the instructor's sensitivity in maintaining a dynamic relationship between challenge and support, "simultaneously affirming and stimulating students as they examined themselves in new and challenging roles" (Glassberg, Note 5, p. 16).

While cognitive-developmental constructs may offer an adequate framework for thinking about teacher development, they cannot help a teacher educator decide when and how to intervene. That takes a

pedagogical rather than a developmental theory. As shall be shown in the next section, articulate practitioners who work out of a developmental framework have given consideration to such a theory.

A Developmental Justification of Practice

The third approach to teacher development includes a set of ideas about professional learning and the conditions necessary to support it, and a range of strategies for working with teachers. While the practices and their rationale are not entirely new, they do represent an alternative to conventional views and formats. Advocates draw support from varied sources, including developmental psychology; however, the crux of the orientation depends on a commitment to certain beliefs and values. Developed by practitioners in the field, the approach has not been the subject of much empirical research to date. We focus on teacher centers and advisory programs as a concrete embodiment of the third view of teacher development.

Background and Underlying Premise

Since the early 1970s, a group of American educators has developed the idea of a small, informal workplace where elementary teachers can come on their own initiative to work on curricula for their classrooms. Kathleen Devaney (Note 9), director of the Teachers' Centers Exchange[3] calls them "teachers' centers" to emphasize "voluntary self-programming by teachers as they seek what they need and share what they do well."

Often the staff includes advisors who go out to help teachers in their schools. As former classroom teachers, advisors view their job

[3]The Teachers' Centers Exchange is an information and referral center and a facilitator for a national network of teacher centers. It is supported by the National Institute of Education's School Capacity for Problem Solving Group and located at the Far West Laboratory for Education Research and Development in San Francisco, California.

as "stimulating, supporting and extending a teacher in her own direction of growth, not implementing a new instructional model or strategy" (Devaney, Note 7, p. 151).

Many of these grass-roots centers were inspired by curriculum projects of the 1960s that emphasized "active learning" and efforts by Americans to learn methods associated with English primary schools. While they differ in various ways--institutional setting, source of funding, program emphasis, scale of operation--they share the following premise:

> Teachers must be more than technicians, they must continue to be learners. Long-lasting improvements in education will come through inservice programs that identify individual starting points for learning in each teacher; build on teachers' motivation to take more, not less responsibility for curriculum and instruction decisions in the school and classroom; and welcome teachers to participate in the design of professional development programs. (Devaney, Note 7, p. 152)

This premise implies a view of the teacher as a person with the potential for professional growth and of an environment that can support continuing learning and change. These two conditions, which depart from traditional assumptions and approaches to inservice training, form the basis for "a developmental style of inservice."

Teachers' Potential for Professional Growth

The teacher is at the center of the educative process. Neither curricular packages nor organizational schemes can replace thoughtful decision making about the needs of particular children in a particular situation. If teaching becomes routine and teachers seem resistant to change, it may be less a comment on their motivation and potential and more a testimony to the way schools are organized and the absence of support for on-the-job learning. Lillian Weber (Note 8), director

of the Workshop Center for Open Education in New York, underscores this basic faith in teachers' capacity to achieve a professional level of practice.

> We found that the necessary decision-making activity of the teacher was submerged under the deluge of details connected with prescribed coverage, routines and control activities. But in our interaction with teachers...we presupposed that teachers could be intelligent observers and decision makers. This assumption that the individual teacher possesses strengths and possibilities is the basis of our work as advisors in support of teachers. (Weber, Note 8, p. 1)

Trust in teachers' initiatives for change and in their choices about what will improve their teaching is bolstered by a view of learning as "mental growth spurred from within" (Devaney, Note 3). Teachers' centers accept teachers own definitions of their learning needs and rely on their intrinsic motivation for collegiality and professionalism as incentives to participate.

> [Teachers' center leaders] feel confident that the homemade, helpful atmosphere of the teachers' center, featuring hands-on learning and peer teaching, can release the ingenuity and increase the self-confidence of those teachers whose problem-solving talent has not been nourished in conventional teacher education. (Devaney, Note 7, p. 162)

A Developmental Style of Inservice

Devaney (Note 9) summarizes the essence of this approach with four terms: warmth, concreteness, time, and thought. These terms offer a succinct diagnosis of what centers believe teachers need to develop and a short-hand description of what they seek to provide. A brief elaboration further illustrates the blend of beliefs and values that shape this approach.

Warmth. Teaching has been called a lonely profession. Many teachers feel unsupported and ill-prepared to do the job expected of them. Typically, teachers do not share their successes or their failures

with one another. Teachers' centers invite teachers to come in out of the cold. They offer a responsive, non-judgemental environment that promotes sharing and a sense of community. "The essence of the teachers' center's alternative style and setting," Devaney (1977, p. 25) observes, "is in convincing the learner of his potential and responsibility for growth. . . . The crucial element in teachers' learning is not a diagnosis of deficiencies, but a conviction of capacity."

Concreteness. Education courses are not very practical and inservice training rarely attends to the problem of local adaptation. Teachers need ideas and materials they can actually use in their classrooms. They also want help with their particular situation. "Concrete" refers to the kind of hands-on, real-life curricular materials that teachers explore and construct in teacher centers. It also implies a focus on the specific and concrete in the teacher's work. In their study of advisory support (classroom advising together with workshop activities housed at a center), Bussis, Chittenden, and Amarel (1976) highlight specificity as a distinguishing characteristic.

> Discussions take place about room arrangement, what might be done with a child who is unable to settle down, ways to extend mathematical concepts with pattern blocks, the pros and cons of a particular book or reading series, how to house a turtle. Whatever the nature of the exchange, it tends to be relevant to a specific teacher, a specific classroom or a specific group of children. Theoretical discussions may well ensue from encounters over specifics, but specifics are the concrete starting point. (p. 29)

Time. The curriculum reform movement of the 1960s underestimated the time it takes to internalize new ways of working and to adapt new curricula to a local situation. Genuine change takes time; long-term growth comes from awareness of need which often emerges in the process of trying something out. As problems arise, teachers

begin to see better what they need to know or be able to do. Teachers' centers structure activities to give teachers time to discover their needs and those of their students. Pat Zigarmi (1978) links this recognition of the importance of time with assumptions about the developmental nature of change.

> Leaders of teacher centers are aware that periods of high activity on the part of teachers alternate with periods of assimilation in which little apparent movement takes place. Because centers take this developmental stance...they have a better view of the amount of energy required for change and of how that energy can best be sustained over time.(p. 197-198)

Thought. Whereas most inservice programs reduce teaching to a technology, center leaders reject the idea that teachers are technicians. Convinced of the complexity and seriousness of teaching, they believe that teachers must take more responsibility for curricular and instructional decisions and "eventually reach a state of development where they see the teaching act itself as a source of knowledge" (Devaney, Note 9, p. 21).

Increased responsibility requires increased understanding, especially about children's learning. Centers with a developmental orientation work to engage teachers in serious study of subject matter and children. Without this understanding, teachers may "open up" their classrooms to "fun activities" that are not educative.

The emphasis on thoughtfulness also implies a valuing of professional autonomy based on awareness and understanding. This is reflected in the goals of advisory programs as defined by Bussis, Chittenden, and Amarel (1976), who studied teachers' perceptions of the advising process.

> Despite their different strategies and logistics, all the advisory services shared the goal of helping teachers assume a more thoughtful and active role in influencing the educational environment.... Their ultimate aim was not to provide isolated services or singular solutions to a particular problem, but to provide a range of support that would enable teachers to analyse situations and arrive at their own decisions. (p. 157)

Stages of Teacher Development

In this third approach, development is seen as an active, self-regulating process, not something that can be engineered by others. Also included is a general idea of the environmental conditions thought necessary to support it--warmth, concreteness, and thoughtfulness over time. Professional growth is defined in terms of increased responsibility for educational decision making.

Still, the literature under this approach says little about what the process of development is actually like. Presumably a center committed to teacher development has some ideas about (1) the kinds of teacher beliefs or behaviors that indicate more or less developed modes of professional functioning and (2) the kinds of activities that are most appropriate given these developmental differences.

The notion of "stages" is part of the vocabulary of developmentally oriented teacher centers. In summarizing what teacher centers do well that traditional inservice programs cannot do, Pat Zigarmi (1978) observes: "They provide teachers with individualized assistance, a variety of resource materials and learning options, and different kinds of assistance at various stages in the process of development" (p. 203).

Descriptions of stages come mostly from advisors working in classrooms with teachers. These advisors tend to characterize teacher growth in relation to their own pattern of work and their developmental

goals.

Maja Apelman (1978), advisor at the Mountain View Center in Boulder, Colorado, sees advising as a way of helping teachers take final responsibility for the curriculum. "The teacher must become a diagnostician who observes the child, listens to the child...and then plans for the child's progress." From her work with teachers, she has identified three overlapping stages, each requiring a different kind of help. The beginning stage calls for practical help, since the teacher is concerned with classroom management and organization. (Note the similarity with Fuller's characterization of beginning teacher concerns.) At the second stage, "how-to" questions are directed toward the materials and activities that teachers have been exposed to at the Center. Because second-stage teachers are not struggling with survival, advisors must work within the existing framework of their classrooms and adapt to their personal styles. In the third stage, teachers realize they could do more to extend children's learning and need help with curriculum building. They have good classroom organization and plentiful materials. Children are interested and involved. Still, teachers are looking for greater depth and more continuity in children's work.

> When teachers have experienced learning in some depth at their own level, when they have solid knowledge of both child development and subject matter and can use it as a basis for their planning, they are ready to extend children's learning and build their own curriculum. (Apelman, 1978, p. 28)

This developmental pattern is similar to an earlier formulation by Lucy Sprague Mitchel, founder of Bank Street College where Apelman was trained and later taught. Mitchel (1950) describes stages of growth toward professional maturity in relation to a workshop conducted during the 1940's in several public schools. Here the influence of progressive educational ideas and practices on the developmental style

of teacher centers is shown.

The Board of Education had been revising the elementary curriculum in the direction of more active learning through direct experiences and Bank Street was asked to assist teachers in implementing the "new" curriculum. The workshop staff conceived of its job as on two levels: "to work with teachers on the basic relationships underlying curriculum thinking while working with them on the new teaching techniques around which their anxieties centered" (p. 142).

Two formats were considered most suited to fostering professional growth in an inservice setting: work with individual teachers in their classrooms and group discussion. Mitchel (1950) justifies group discussion with developmental arguments familiar to teacher center advocates.

> Group discussions can bring about a sharing of the problems which teachers have in common in their work and break through a sort of wary isolation in which so many teachers work; they help extend a teacher's thinking about his job from his classroom to the whole school...This makes for the development of wider interests and wider responsibilities. This development cannot be hurried. It is not a thing that can be taught directly. It develops gradually at different rates and along different lines with different groups of teachers. Here a workshop must follow the leads of the teachers. (p. 386)

Mitchel relates teachers' initial preoccupation with how to use the "new" techniques to their attitude toward work. Basically, teachers saw themselves as responsible for carrying out official directives, but not for thinking for themselves. The first stage of professional growth was reached when teachers felt confident enough to try something new and not unduly upset if it did not work just right.

The second stage was marked by a desire to acquire more background content. At first, the staff supplied source materials which the teachers eagerly used. Gradually, they came to realize that they needed to know more to teach this way. This meant a growing appreciation for the variety

of sources that could enrich the curriculum and an acceptance of more after-school work as part of their job.

Teachers' understanding and interest broadened along two lines--subject matter and child development.

> We were leaving the stage of development that calls for the answers to the "just how do we" questions and taking our thinking into the realms of "why do we do what we do" in terms of our understandings of children's growth and development.

When the two lines merged in a concept of curriculum building, the third stage had been reached.

Mitchel adds a fourth stage when teachers see the relation between their work and the world outside the school and feel they are engaged in a socially important and intellectually simulating profession.

Developmental Pattern of Work

Similar developmental patterns emerge from the only extensive study of advisory programs to date. Bussis, Chittenden, and Amarel (1976) conducted in-depth interviews with 60 elementary-school teachers who were trying to diversify the curriculum move away from whole-class teaching and create more internal relationships in their classroom. The interviews focused on teachers' beliefs about children, curriculum, and the work environment on the assumption that the quality and quantity of decision making depends on teachers' understanding of children and curriculum, and the degree of institutional support. Forty-six of the teachers were participating in some form of advisory program and one section of the interview focused specifically on the kinds of support they received from advisors.

Teachers' responses were coded in two ways: (1) according to the type of activity that the teacher perceived the advisor to be engaged

in and (2) according to the degree of supportiveness experienced by the teacher. Twelve categories of support were identified:

Advisors perceived as...

1. Service and Administrative Agent
2. Extention of Teachers (helping hand...)
3. Emotional Stabilizer and Stimulator
4. Respector of Individuality
5. Stage Director and Demonstrator
6. Diagnostician and Problem-solver
7. Provider of Alternatives
8. Explainer and Theorist
9. Modeling Agent
10. Appreciative Critic and Discussant
11. Provocative and Reflective Agent
12. Leader and Challenger

(p. 144)

These categories are placed on a continuum to show "a progression from what is basically a consumer orientation...to a more active role by the teacher in terms of self-investment, critical judgment, inference, conceptual reorganization" (p. 157). The researchers use the concept of "mediation" to characterize teachers' stances toward advisory support, how they "use" what the advisor has to offer. For example, the three categories concerned with how teachers perceived advisors' work with children (Extension of Teacher, State Director and Demonstrator, and Modeling Agent) fall into different groupings along the mediation continuum. The first is considered a form of external support and therefore not mediated or internalized in any way. The second falls into a grouping characterized as minimally mediated--the teacher takes in the idea or behavior only in the sense of being able to remember and communicate it. The third category, modeling, is part of a grouping of maximally mediated categories. Here the teacher's response seems to indicate that she has "given 'shape' to the ideas and thoughts that came out of an interaction with the advisor and...made those ideas and thoughts her own" (p. 159).

The categories of support at the far end of the continuum refer to intellectual activities associated with the long-range goal of advising: "helping teachers assume a more thoughtful and active role in influencing the environment," and enabling teachers "to analyze situations and arrive at their own decisions about problems and their solutions to them" (p. 156). Teachers whose perceptions are coded in these categories have "a higher mediation index" than teachers whose perceptions are coded in categories at the opposite end of the continuum.

Does this mean that they are functioning at a "higher" level of professional development? The researchers deny the existence of any normative standards by which to judge what is "high" or "low" mediation for teachers *in general*. They do, however, suggest that receptivity to advisors and mediation of support appear to be linked to understandings of curriculum and children that parallel the philosophy of open education. That philosophy is operationalized in a set of coding schemes that the researchers view as "the most important outcome of the study" (p. 48).

Advisors were most helpful to teachers who could see connections between their learning priorities for children and the "surface curriculum" of their classroom, and who were experimenting with activities and materials responsive to children's interests. Advisors were least helpful for teachers whose goals for children were mainly "grade level facts and skills" and "good school behavior" and who had not been experimenting much with their surface curriculum.

What accounts for these differences? The researchers suggest that the answer partly resides in teachers' understanding of children and child development. Is it not likely that Witherell, whose research we examined in the second part of this paper, would speculate that teachers

in the first group were more advanced in measures of psychological development? A number of the coding schemes suggest parallels between the ideology of open education and theories of (ego) development.

Conclusion

At least three distinct approaches to teacher development exist in the educational literature. One indication of their distinctness not discussed earlier is the lack of references across approaches--a paper classified as belonging to the first approach is highly unlikely to make any reference to literature in the other two approaches. The superficial similarity in vocabulary, combined with the different interpretations of that vocabulary, is bound to confuse educators and researchers trying to understand the significance of the switch from teacher education and training to teacher development.

Which approach to teacher development should a teacher educator or educational researcher adopt? What value is there in the switch to developmental rhetoric? What problems will this shift carry with it? We have only hinted at some of the strengths and weaknesses of these three approaches. We have not considered in detail questions about the adequacy of developmental models for describing differences among teachers or changes undergone by a single teacher. Nor have we addressed the difficult questions about the mechanisms for change implicit in these approaches and the consequent implications for designing programs to foster teacher development. We have not considered whether, indeed, teacher development, as conceived in these approaches, is something that should be fostered.

We plan to extend our analysis of these approaches in future work, touching on some of the points listed above. We hope that this paper

will assist others in critically approaching the growing literature on teacher development, and that proponents of each of the three approaches will profit from a comparison of alternatives.

Reference Notes

1. Sprinthall, N. Adults as learners: A developmental perspective. Paper presented at invitational conference on exploring issues in teacher education research, Research and Development in Teacher Education Center, University of Texas at Austin, 1979.

2. Heath, D. Toward teaching as a self-renewing calling. Paper presented at invitational conference on exploring issues in teacher education research, Research and Development Center for Teacher Education, University of Texas at Austin, 1979.

3. Devaney, K. On delivering staff development. Staff Development Newsletter, Winter 1978, Austin, Texas: Professional Development Associates.

4. Fuller, F. Personalized education for teachers: One application of the teacher concerns model. Research and Development Center for Teacher Education, No. 2314, University of Texas, Austin, Texas, 1970.

5. Glassberg, S. Student-teaching supervision: Designed, implemented and evaluated from a developmental perspective. Paper presented at the annual meeting of the American Educational Research Association, Toronto, Canada, 1978.

6. Fuller, F.F., Peck, R.F., Bown, O.H., White, M. & Garrard, J. The influence of psychological feedback on empirically derived covert professional concerns of student teachers. Austin, Texas: Research and Development Center for Teacher Education, University of Texas, 1967.

7. Devaney, K. Mapping new territory. In K. Devaney (Ed.), Essays on teachers' centers. San Francisco, Ca.: Teachers' Center Exchange, Far West Laboratory for Educational Research and Development, 1977, pp. 149-179.

8. Weber, L. Letter from the director. NOTES. New York: Workshop Center for Open Education, City College, Spring 1977.

9. Devaney, K. Warmth, concreteness, time and thought in teachers' learning. In K. Devaney (Ed.), Essays on teachers' centers. San Francisco, Ca.: Teachers' Center Exchange, Far West Laboratory for Educational Research and Development, 1977, pp. 13-27.

References

Apelman, M. A permanently tentative curriculum. In R. Edelfeldt and E. Brooks (Eds.), Breakaway to multidimensional approaches: integrating curriculum development and inservice education. Washington, D.C.: Association of Teacher Educators, 1978.

Bussis, A, Chittenden, E., & Amarel, M. Beyond surface curriculum: an interview study of teachers' understandings. Boulder, Co.: Westview Press, 1976.

Flavel, J. Cognitive development. Englewood Cliffs, N.J.: Prentice-Hall, 1977.

Fuller, F. F. Concerns of teachers: a developmental characterization. American Education Research Journal, 1969, 6:(2), 207-226.

Fuller, F. F., & Bown, O. Becoming a teacher, In K. Ryan (Ed.), Teacher education., The Seventy-fourth Yearbook of the National Society for the Study of Education, Part II., 1975.

Gabriel, J. An analysis of the emotional problems of the teacher in the classroom. London: Angus and Robertson, Ltd., 1957.

Jackson, P. W. Life in classrooms. New York: Holt, Rinehart and Winston, 1968.

Katz, L. Developmental stages of preschool teachers. Elementary School Journal, 1972, 73, 50-54.

Kohlberg, L. Stage and sequence: the cognitive-development approach to socialization. In D. Goslin (Ed.), Handbook of socialization theory and research. Chicago: Rand McNally & Co., 1969, 347-480.

Lieberman, A. & Miller, L. Staff development: new demands, new realities, new perspectives. New York: Teachers College Press, 1979.

Loevinger, J. Ego development. San Francisco, Ca.: Jossey-Bass, 1976.

Maslow, A. Motivation and personality. New York: Harper & Row, 1954.

Mitchel, L. Our children, our schools. New York: Simon and Schuster, 1950.

Sigel, I. Constructivism and teacher education. The Elementary School Journal, May 1978, 78:(5), 333-338.

Witherell, C., & Erickson, L. Teacher education as adult development. Theory Into Practice, June 1978, 18:(3), 229-238.

Zigarmi, P. Teacher centers: a model for teacher-initiated staff development. Teachers College Record, September 1978, 80:(1), 172-187.